The 'Eyes' Have It: An Inquiry Investigation

Station 8 Student Information Page 5C

Complete the following on your *Student Data Page*, research notebook, or notebook paper.

Problem Statement:

Review the station activities you have completed regarding **"Portion Distortion"** and choose the one you and your group would be most interested in studying further. Your job will be to design an experiment to determine how well people can learn to use this technique to estimate serving sizes. You could also compare two or more techniques to see which your test subjects can use with the greatest accuracy. You must have at least 10 other people (test subjects) in your experiment (more is much better). Write a problem statement for your investigation.

Activity Background:

You have seen how portion sizes have increased over the past 20 years and how much difference this can make in the number of calories taken in daily. Research some basic information about the ***obesity epidemic*** in the United States to gain insight into how large of a problem it has become. Once you know some of the basic facts about obesity, research information about people's ability to ***estimate serving sizes***.

Identify Variables in the Experiment:

Write the ***independent variable*** and the ***dependent variable*** for this investigation and list some constants that would be important in controlling the experiment.

Hypothesis:

Write a hypothesis based upon the background that predicts how the independent variable ***may*** affect the dependent variable. Be sure to write the hypothesis as an ***"if, then"*** statement.

Activity Materials:

Use materials as provided in the station activity you are choosing to investigate.

Procedure:

Write a procedure to follow for your investigation. This is the part of your experiment where you control variables, so give careful thought to this part of your study.

Results:

1. Design a data table in which to record your results.
2. Graph the results; be sure to include a title and axes labels on your graph. Be sure to include averages as appropriate.
3. Discuss your findings using data from your data table and graph.

Conclusions:

Explain whether your results did or did not support your hypothesis. Be sure to explain.

Applications:

Explain 3 ways in which the results of your investigation might be used.

Extensions:

Explain 3 additional experiments related to this one. These should be ideas that would extend what you learned in your first experiment.

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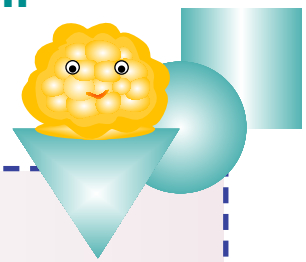


Problem:

Identifying Variables:

In this activity, you will be conducting an experiment.This experiment has an independent variable and a dependent variable. The independent variable in an experiment is the variable chosen by the experimenter and it is manipulated or changed by the experimenter. The dependent variable is measured for the effect the independent variable has on it. Identify the independent and dependent variables in this experiment.

Independent variable: _____

Dependent variable: _____

In order to have a controlled experiment, all variables except the independent and dependent variables must be controlled. This is done by making sure that they are the same for all test groups. These are called constants in an experiment. List 3 variables that are made constant in this experiment.

_____

_____

_____

Hypothesis: (Be sure to use an "if, then" statement)

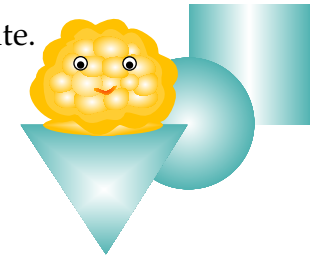
_____

_____

_____

Activity Materials:

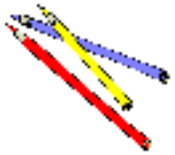
Use materials as provided in the station activity you are choosing to investigate.



Procedure:

Write a procedure to follow for your investigation. This is the part of your experiment where you control variables, so give careful thought to this part of your study.

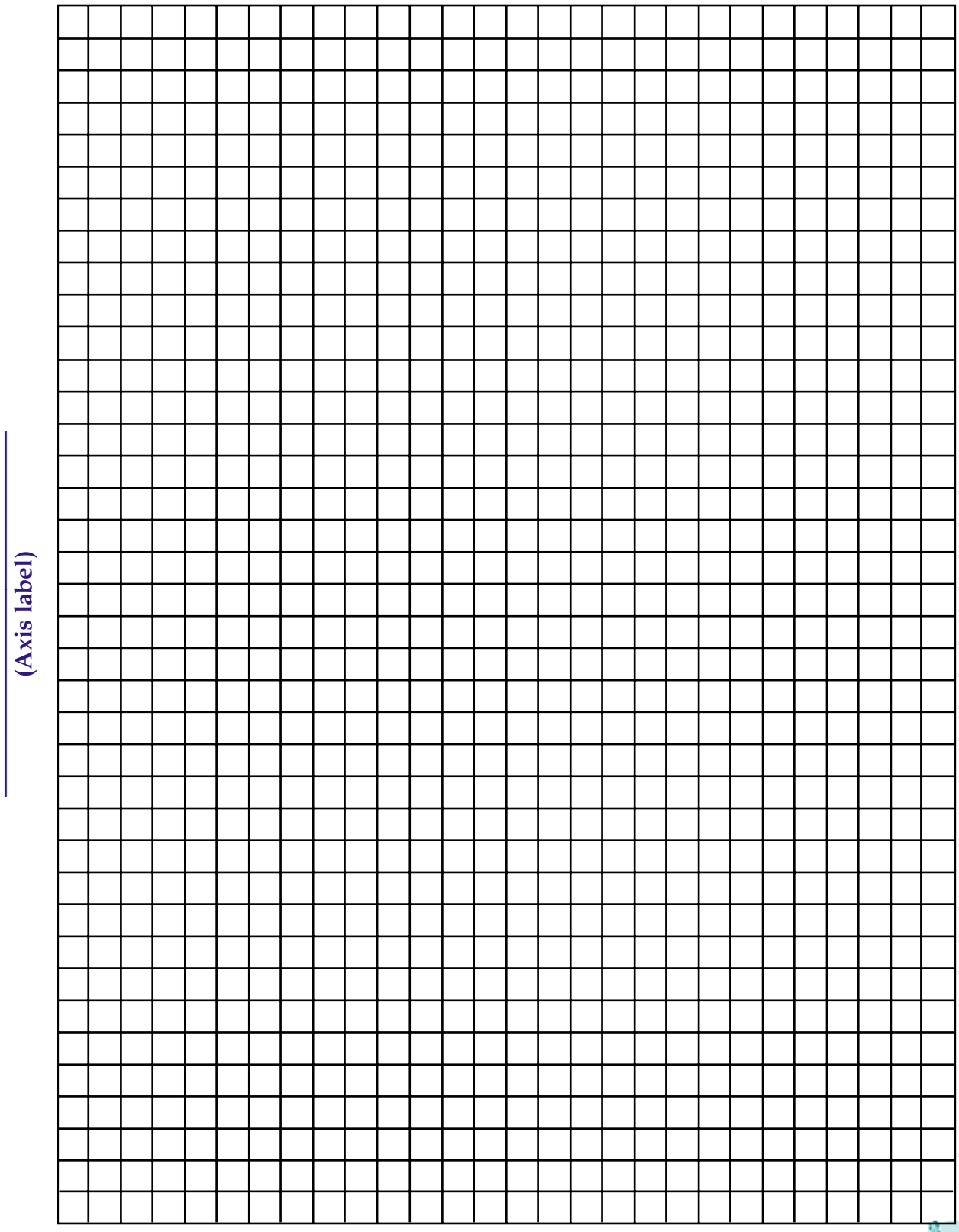
Results:



A. Data Table

B. Graph

Student Name _____



C. Explain your results

Conclusions:

Applications:

Extensions: